

moisture, air, light [e.g., ultra-violet light], heat fluctuations, and the like). In some embodiments, the assay tests comprise one or more stabilizers that increase shelf-life in response to environmental exposure.

In some embodiments of the present invention, assay tests are contained in a first package. The first package may contain one or more tests. In embodiments where the first package contains more than one test, the test may be contained in one or more compartments in the first package. In some embodiments, the first package is sealed to protect the assay tests from the environment. In some embodiments, one or more of the first packages are contained in a second package. In preferred embodiments, two or more first packages are contained in a second package which can be independently opened to gain access to the assay test. The present invention contemplates delivery systems comprising such first and second packages. In further embodiments, the delivery system provides placards so that instructions, labels, warnings, or other text or diagrams are easy to notice and read. In some embodiments, such materials are provided on the first or second packages or on the assay test itself.

In yet other embodiments, the delivery system stores multiple tests and is configured to dispense a single assay test without exposing the remaining tests to the environment. For example, in one embodiment, test strips are provided in a ribbon form within the delivery systems, wherein the tests are connected to one another end to end with a serration creating the division point between test strips. In some embodiments, the ribbon is provided in a roll within the delivery system. In such embodiments, a small portion of the end test strip can be exposed to the environment such that the reactive portion of said test strip is maintained within the delivery system without being exposed to light or moisture from the outside environment. A user pulls the end of the strip forward out of the device such that the reactive portion of the desired test strip and the end of the next test strip emerges from the delivery system. The serration between the desired test strip is then severed to release the desired test strip for use, leaving the end (the non-reactive end) of the next test strip exposed for future use. In still other embodiments, the multiple test strips are not connected to one

another, but are still dispensed from the delivery system a single test strip at a time. In such embodiments, the user activates a selector contained on the delivery systems which forces a single test strip out of the delivery system while maintaining the remaining test strips within the protective environment of the delivery system (*See e.g.*,
5 U.S. Pat. No. 4,911,344, herein incorporated by reference in its entirety). In some embodiments, the test strip is dispensed by a pivoting cover having an internal finger portion that pushes the topmost test strip of a stack of test strips outwardly from the top of the dispenser as the cover pivots (*See e.g.*, U.S. Pat. Nos. 4,171,753, 3,942,683, 3,845,882, 3,844,445, 3,565,284, 3,410,455, and 2,853,206).

10 **B. Operation**

In one preferred embodiment of the present invention, the delivery system is operated by opening the delivery system. In some embodiments, a test is then removed for use. In other embodiments, a removable protective encasement that covers a compartment of the delivery system is peeled or folded back or otherwise
15 opened or removed to reveal an assay test. The assay test is then removed for use.

One embodiment of the delivery system of the present invention is illustrated in Figures 3 and 4. The delivery system is rectangular, flat, and thin, similar in size and shape to a credit card, so that it is easy to carry in a wallet, pocket, or purse. The delivery system is approximately 2 mm in thickness, and has overall dimensions of
20 roughly 5.5 cm x 8.25 cm, although smaller or larger delivery systems can be generated as desired. The components of the delivery systems in Figures 3 and 4 are a compartment 44, hinge 45, locking mechanism 48, indentations 56, and three placards 46, 50, and 54. The compartment 44 holds multiple assay tests and can hold fewer or more assay tests than are shown in Figure 3. Assay tests are individually placed in a
25 foil or other protective encasement 72, shown in Figure 12a, so they can be used on separate occasions. In addition, multiple assay tests are individually placed in protective encasements 72 so that the supply of assay tests can last an individual a period of weeks or months. Further, multiple assay tests are contained in the delivery system so that individuals have enough assay tests to determine if their analyte

concentration has dropped over time on one distinct occasion. Alternately, the compartment 44 can be covered with a removable protective encasement, which can be peeled back or otherwise removed to reveal an assay test as shown in Figure 12b.

As shown in Figures 3 and 4, the hinge 45 is constructed in conjunction with the delivery system to form one molded part. The hinge 45 is made of a material such as plastic, although a variety of materials are contemplated by the present invention, that allows the delivery system to be easily opened and closed to access assay tests. The locking mechanism 48 is constructed so that the delivery system closes tightly to protect assay tests. In addition, the delivery system is constructed of a material such as hard plastic, although a variety of materials are contemplated by the present invention, that will protect the assay tests and add to their durability. The indentations 56 are molded to protrude into the compartment 44 to limit the ability of the assay tests to move and consequently become damaged while inside the delivery system. Finally, three placards 46, 50, and 54 allow instructions, labels, and warnings to be easily noticed and read. Placard 50 refers to the front of the top of the delivery system. Placard 46 refers to the back of the top of the delivery system. Placard 54 refers to the back of the bottom of the delivery system.

Additional embodiments of the assay tests are shown in Figures 8, 9, 10, and 13a-f. There are various possibilities to how the absorbent material 42 is fitted into the well 38 in one easy step. In Figure 8, the hinge 15 allows both the well 38 and well covering 40 to easily fold, snap, and lock around the absorbent material 42. In Figure 9, a sliding mechanism 17 replaces the hinge 15 so that the well 38 and well covering 40 easily slide on top of and tightly lock around the absorbent material 42. There are also various possibilities to the number of parts necessary to build an assay test. In Figure 10, the top 21 is not used. Instead the middle 20 is colored such that the sheet 14 cannot be viewed except through the windows 30 and 22. In addition, there are various possibilities for the location of the reaction means. In figures 13a-f, the reaction means is located on a sheet 14 and/or in one or more chambers 31. In figures 13a-f, when an individual folds or slides the assay test to operate it, a